An Assessment of Chlorinated Hydrocarbon Effects on Development of Wild Mink (Mustela vison) from Ontario and British Columbia, Canada

John Elliott, Pam Martin, Laurie Wilson, Christy Morrissey*
Canadian Wildlife Service, Delta, BC

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Carcasses of trapper-caught mink were collected at industrial and reference sites around the Great Lakes in Ontario and along the coast of British Columbia A total of 238 mink carcasses were obtained during the winters 1998-2002. The study was prompted by reports of associations between PCBs and TCCD toxic equivalents and reproductive development in male mink and river otter (Lutra canadensis) from the Pacific Northwest, and laboratory studies reporting TCDD effects on sexual development of male rodents. All carcasses were examined for abnormalities and morphometric endpoints including age, sex, body condition, sub-cutaneous fat, body and organ weights and baculum weight and length were collected. Tissue from a sub-set of carcasses (n=150) were analyzed for PCBs and OC pesticides. A subset of samples were also analyzed for polychlorinated dibenzo-p-dioxins, dibenzofurans and mercury. Some 10 % of animals exceeded LOAELs for PCB effects on reproduction in female mink. Similar criteria are not yet available for males.. Significant statistical associations between PCB concentrations in liver and baculum length and mass were determined, but varied with age and body condition. Further analysis will be presented and discussed.